

WEST

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L9: Entry 2 of 6

File: USPT

Oct 30, 2001

DOCUMENT-IDENTIFIER: US 6310308 B1
TITLE: Compact push-button switch assembly

Detailed Description Text (8):

The optional light source 14 is used when the switch assembly 10 is illuminated; illuminated switch assemblies are typically used as "annunciators" that indicate the switch function is on, or has changed status. Light sources can also be used to simply illuminate the cap for identification purposes and include indicia such as letters, numbers or symbols. When present, the light source 14 is mounted to the top 28 of the base and is powered by the conductive materials or electronic circuits 29 that are integrated into the base and connected to the circuit board, as described above. There may also be more than one light source in a particular switch, for example in a case where the switch controls a function that can have more than two statuses. The detail of the indication can vary widely based upon the selection of indicia, brightness, colors, etc. The particular light source used depends on the design requirements, but can include light emitting diodes (LED), organic light emitting diodes, electro-luminescent lamps, incandescent lamps, LCD or other lighted display technologies.

Detailed Description Text (15):

The switch assembly 10 is uniquely configured to combine existing technology in a new way. It provides a small, deceptively simple, yet effective device. The unique design allows removal and installation of the cap assembly for rapid panel or keyboard reconfiguration. The cap can be easily removed from the base and actuator, or changed with another shape/size or indicia. A different front panel housing or keyboard face can be placed over the reconfigured switch array, creating a different end product. This allows rapid or last minute assembly reconfigurations. Larger self-contained discrete switches with individual housings are available, however this embodiment provides a configuration that is small and does not require an individual housing for each switch. Moreover, the commercially available discrete switches are longer and they require more depth or penetration into the device behind the front surface.

Detailed Description Text (18):

The light source(s) (LED, OLED, incandescent, electro-luminescent, LCD, and illuminated display) are positioned within a cap that moves during actuation. The design lends itself to configuration for "split cavity" or "split legends" allowing independently illuminated indicia and/or colors of indicia within the same cap.